EXHIBIT
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IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

Edward Sullivan, *Plaintiff,* v. Jeffrey Brodsky, Eric Kayne, & Morgan Stanley, *Defendants.*	Case No. 1:07-cv-00003-BSJ-KNF

Expert Report of Frederick L. Oswald, Ph.D.

I. Introduction

1. I have been retained by the law firm of Morgan Lewis & Bockius, LLP, on behalf of Morgan Stanley, to offer my expert analysis of the scientific validity and reliability of the opinions expressed by Dr. Caren B. Goldberg in her Expert Report ("Goldberg Report") dated December 19, 2007. I have not been asked to make any affirmative findings about the facts of this case.

2. I hold a Ph.D. in industrial-organizational psychology from the University of Minnesota. I am a tenured Associate Professor of Psychology at Michigan State University teaching in the area of industrial-organizational psychology, which is the branch of psychology that studies human resource and personnel selection issues. My curriculum vitae, which is attached hereto as Exhibit A, lists my publications and provides a detailed record of my educational and employment background.

3. I regularly teach courses on research design, data analysis,a nd personnel psychology,a nd I regularly conduct research on personnel selection in corporate, military and educational contexts. In addition, I have consulted and continue to consult with government agencies and private companies on a number of projects that involved the selection and performance of personnel.

4. I currently serve on the editorial boards of four of the leading peer-reviewed journals for industrial-organizational psychology: *Journal of Applied Psychology* (2005-present), *International Journal of Selection and Assessment* (2003-present), *Journal of Management* (2003-present), and *Organizational Research Methods* (2007-present). In addition, I serve as an ad hoc referee for the following peer-reviewed journals: *Personnel Psychology*, *Organizational Behavior and Human Decision Processes*, *Journal of Occupational and*

Organizational Psychology, *Applied Psychology: An International Review*, *Journal of Personality and Social Psychology*, *Multivariate Behavioral Research*, *Psychological Methods*, *Applied Psychological Measurement*,*Brit ish Journal of Mathematical and Statistical Psychology*, *Learning and Individual Differences*,*Europe an Journal of Psychology*, *Journal of Memory and Language*,*Psy chology and Aging*,*Me asurement and Evaluation in Counseling and Development*, *Basic and Applied Social Psychology*, *Journal of Abnormal Child Psychology*, *Journal of Counseling Psychology*, *Journal of Clinical Child and Adolescent Psychology*, and *American Journal of Evaluation*.

5. Through my education and professional experience, I am very familiar with the methods and norms within psychology and with social scientific research on personnel selection and biases in personnel processes. Two of my publications are cited in *Principles for the Validation and Use of Personnel Selection Procedures* (Society for Industrial and Organizational Psychology, 2003), a canonical reference for personnel selection research and practice by industrial and organizational psychologists, and I have co-authored a review of personnel selection in the prestigious *Annual Review of Psychology* (Hough & Oswald, 2000).

6. In preparing this Report, I reviewed Dr. Goldberg's Report and all of the litigation materials that Dr. Goldberg states that she considered to form her opinions, as well as all of the exhibits to the deposition transcripts listed by Dr. Goldberg and additional academic research, which is listed in the Reference section to my Report.

7. I have not testified as an expert witness within the last four years. My hourly rate in this matter is $600.

II. Summary of Opinions

8. As I explain in detail below, Dr. Goldberg's Report does not accurately cite and describe the current scientific literature on stereotyping. Moreover, Dr. Goldberg's efforts to apply this literature to the present case to support her stated conclusions are fundamentally flawed from a scientific perspective.

9. With respect to her citations to the stereotyping literature, Dr. Goldberg's opinions about stereotyping and age discrimination are not supported by the limited sources that she cites, and Dr. Goldberg completely ignores a number of peer-reviewed studies that directly contradict the propositions that she offers in her Report.

10. With respect to her application of the stereotyping literature to this case, Dr. Goldberg offers unqualified opinions about the causes of Mr. Sullivan's termination without following appropriate methods for reaching scientifically sound causal conclusions. Dr. Goldberg's analysis also ignores important variables and evidence from the litigation record that any reasonable scientific approach to analyzing potential age bias within an organization would consider.

11. In sum, Dr. Goldberg's analysis and opinions in this case would not survive a scientific peer review within the field of industrial-organizational psychology. Dr. Goldberg's Report portrays the research literature and the case-specific data tendentiously rather than impartially, and her Report extrapolates from this limited set of studies and data in an unscientific and unbalanced manner.

III. Improper Citation and Incorrect Application of Research on Stereotypes and Personnel Selection

12. Throughout her Report, Dr. Goldberg invokes dated research literature on age stereotyping to support her opinion that Mr. Sullivan was terminated because of his age. Dr. Goldberg asserts that the "link between ageist stereotypes and age discrimination is well documented" (Goldberg Report, p. 3) and opines that conditions in this case produced the "perfect storm" of stereotyping and age discrimination (Goldberg Report, p. 4).

13. As I discuss in this section, Dr. Goldberg ignores a number of more recent and important studies indicating that stereotypes in general, and age stereotypes in particular, rarely produce strong effects in real work settings, where experienced managers have a host of job-relevant information concerning their subordinate's talents and limitations (versus the laboratory setting, where age is made to be highly salient absent other relevant information). Indeed, it is well-established within industrial-organizational psychology that subjective judgments in personnel selection often are accurate and assess job-relevant factors (e.g., both subjective job performance and training performance ratings are predicted by ability and personality tests – see the meta-analysis, or quantitative synthesis,[1] presented by Schmidt & Hunter, 1998; subjective job performance ratings are also predicted by subjective employment interviews – see the meta-analysis by McDaniel et al., 1994). Conversely, the evidence that subjectivity leads to group-based biases in workplace settings is weak and conditional, as will be discussed.

14. I also discuss the situational factors that Dr. Goldberg considers to conclude that they led to a "perfect storm" for discrimination in this case. The few studies that Dr. Goldberg

[1] Meta-analysis consists of "combining of numerical results from a few or many studies, the accurate estimation of descriptive statistics and the explanation of inconsistencies as well as the discovery of moderators and mediators in bodies of research findings" (Rosenthal & DiMatteo, 2001, p. 61).

selectively cites do not support her conclusion, and the larger research literature points to a contrary conclusion.

A. As a General Matter, Stereotype Effects Tend to Be Weak

15. In their highly cited review of stereotyping research, published in the top-tier journal *Psychological Bulletin*, Kunda and Spencer (2003, p. 523) explain that, "although early research suggested that anyone who encounters a member of a stereotyped group activates that group's stereotype spontaneously ..., it is now clear that such spontaneous stereotype activation is neither inevitable nor universal ..., it depends on perceivers' prejudice, goals, cognitive resources, and learned associations...."

16. Jussim and colleagues (2005) reach the same conclusion in their recent literature review:

> [T]he accumulated evidence indicates that expectancies do not greatly bias social perception. Table 1 presents the results from meta-analyses of studies assessing expectancy-confirmation in many contexts. It shows that the effects of expectancies, averaged over hundreds of experiments, range only from zero to .25.
>
> The simple arithmetic mean of the effect sizes is .10, which is an overestimate because the meta-analyses with more studies yielded systematically *lower* effect sizes. The few naturalistic studies of expectancy-confirming judgmental biases have yielded similarly small effects .... An overall effect of .10 means that expectancies substantially influence social perceptions about 5% of the time (following Rosenthal's (1984) binomial effect size display.) This

means they *do not* influence perceptions about 95% of the time" (p. 86, emphasis in original).

Thus, although systematic biases can arise under special circumstances, the research literature shows that human social perception is highly responsive to substantive (e.g., job-relevant) information about individuals, going beyond information that simply pertains to membership in a particular age group (see also Jussim, 1991).

B. As a Specific Matter, Age Stereotype Effects Are Weak and Conditional in Work Settings

17. The research discussed immediately above refers to all types of stereotyping, including racial, ethnic, gender and age. Age, however, differs from these other forms. Although race and gender are generally immutable, everyone who lives long enough will become "old." Therefore, it is important to consider whether the literature on age stereotyping has reached any findings unique to this form of potential bias.

18. Research on bias against older workers has yielded mixed empirical results: Some studies have found a bias against older applicants and job incumbents (e.g., Cleveland & Landy, 1983; Rosen & Jerdee, 1976a, 1976b); others have found no significant differences (e.g., Erber et al., 1994; Hitt & Barr, 1989; Weiss & Maurer, 2004); and still others report a bias in favor of older workers (Gibson et al., 1993; Liden et al., 1996).

19. In their recent meta-analysis of prior studies on age stereotyping, Gordon and Arvey (2004, p. 485) observe that "the relatively small effect size found for age bias in the present review (especially in the more current data) suggests that age bias may actually be less of a problem today than it was in previous decades" (see also Weiss & Maurer, 2004, for further recent evidence of this positive change). This small age bias effect in recent studies coincides with the aging of the baby boom population, which is sensible in that older workers are

becoming more of the norm in the U.S. labor force (e.g., for data, see Bureau of Labor and Statistics, Current Population Survey data at http://www.bls.gov/cps/home.htm; see also Hedge, Borman, & Lammlein, 2006). These empirical findings by Gordon and Arvey are particularly significant when contrasted with the few studies that Dr. Goldberg selectively cites, many of which are dated. For instance, the meta-analysis she cites (Finkelstein et al., 1995; see Goldberg Report, p. 20) is 13 years old – old enough to be included in the Gordon and Arvey meta-analysis. Additionally, she solely relies on two articles that are 25 and 32 years old to claim that the effects of technological changes affect older workers negatively (Cleveland & Landy, 1983 – Goldberg cites it as 1981, and Rosen & Jerdee, 1976b, respectively). In general, Dr. Goldberg did not update her Report to reflect the current state of the science that shows a reduction in age stereotyping and age stereotyping effects.

20. Gordon and Arvey offer an important additional point to accompany their conclusion that age bias has become less potent over time. Their point is that "a large number of variables were shown to moderate this effect" (Gordon & Arvey, 2004, p. 485). In particular, Gordon and Arvey's meta-analysis of studies involving a total of 28,344 subjects concluded that the trends in age bias were weaker across a variety of conditions that are important to the case. They found that age bias was:

- weaker in field studies than in lab studies (*lab studies often make age much more salient than in the work setting; once in the work setting, then age bias was much less potent*),[2]

[2] A meta-analysis conducted around the same time by Kite et al. (2005) finds larger effects for age bias; but importantly, that meta-analysis tends only to rely on laboratory studies, not field studies, and does not conduct separate analyses comparing the two research settings. Even keeping this limitation in mind, note that Kite et al. still state that "effect sizes were reduced

- weaker when the raters were real-life supervisors rather than undergraduate and graduate students (*students were **more biased** than supervisors, indicating that using students as subjects in the lab will lead to false impressions about the strength and pervasiveness of age bias*),
- weaker when supervisors or other raters had a host of relevant information about the ratees (*e.g., job-relevant information and not just information about age)*,
- weaker when supervisors or other raters were rating job incumbents rather than job applicants (*a finding consistent with "more information, less bias," because raters will generally have more information about job incumbents than job applicants*),
- weaker when supervisors or other raters had more experience in making ratings,
- weaker when supervisors or other raters made multiple judgments of ratees in the rating process (*as in a 360 degree performance rating process*), and
- weaker in later studies compared to earlier studies, as already noted above (*suggesting an attenuation in age bias from 1963 to 1998, the span of dates of the studies included in this meta-analysis*).

21. In sum, a recent meta-analysis of age bias research shows that the magnitude of age bias is likely to be small to non-existent in conditions similar to those found in this case:

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significantly when judgments were based on extensive, rather than minimal information" (p. 255).

post-1998 performance ratings of incumbent employees in a real job setting by an experienced supervisor who was making multiple ratings based on individualized information.

22. Dr. Goldberg does not acknowledge this recent research pointing out important factors (moderators) that influence and weaken age-bias effects. Instead, her Report erroneously assumes that findings of age bias in a laboratory study of college students or in a survey conducted in the 1980s will generalize to the current situation: a modern workplace involving an experienced supervisor who could be punished for engaging in age discrimination and who is making high-stakes decisions based on much more job-relevant interactions and information than is typically provided in a laboratory study of age discrimination.

23. I further explain in the next section why Dr. Goldberg's neglect of important studies and variables constitutes a serious scientific error in her effort to apply organizational research to this case.

C. The Personnel Selection Literature Does Not Support the View that Subjective Judgment Inevitably Produces Age Bias

24. Dr. Goldberg employs a unique definition of stereotyping in her Report. According to Dr. Goldberg, "judgments and instincts are synonymous with stereotypes" (Goldberg Report, p. 4),a nd apparently age stereotyping in particular. More specifically, she quotes Mr. Gorman having a "subjective judgment" or "point of view" or making a "judgment call" or relying on "instinct" as if this means he has admitted "to relying on stereotypes" (Goldberg Report, p. 7). Stereotypes have a different and narrower definition within psychology, as shown by the sample definitions below, which also indicate that psychologists do not treat stereotyping as synonymous with subjective judgment, as Dr. Goldberg does:

> Whether favorable or unfavorable, a stereotype is an exaggerated belief about a category. Its function is to justify (rationalize) our conduct in relation to that category (Allport, 1954, p. 191).

Ashmore and Del Boca (1981) suggested the following core definition of *stereotype:* "A set of beliefs about the personal attributes of a group of people" (p. 16). To this these authors added the notion of cognitive structure and rephrased this core definition in terms of the person perception construct, implicit personality theory (Rosenberg, Nelson, & Vivekananthan, 1968), as follows: A stereotype is a hypothetical cognitive construct that comprises the structured set of inferential relations that link personal attributes to a social category . . . (Ashmore & Longo, 1995, p. 64).

Although no single definition of *stereotype* is unanimously accepted, most researchers agree that stereotypes involve ascribing characteristics to social groups or segments of society . . . . These characteristics may include traits (e.g., *industrious),* physical attributes, societal role (e.g., occupation), or even specific behaviors. Stereotypic characterizations of a social group are implicitly comparative. For example, the belief that the "Chinese are industrious" implies that the Chinese are more industrious than most other ethnic groups. Many scholars make a distinction between the mean and variance of each dimension composing a stereotype. For example, an individual may believe that the average basketball player is extremely tall but also recognize that there is considerable variability among basketball players along this dimension. A stereotype may be accurate or inaccurate in either of these respects (Ottati & Lee, 1995, p. 30-31).

25. Within industrial-organizational psychology, subjective judgment is not viewed as synonymous with stereotyping, and it is not the trigger to age-related bias that Dr. Goldberg suggests:

> There is increased recognition that subjectivity does not automatically translate into rater error or bias and that ratings are most likely valid reflections of true performance and represent a low-cost mechanism for evaluating employees. The notion that performance evaluations and particularly supervisory ratings of performance are biased against racial and gender groups is simply not supported by the empirical data (Arvey & Murphy, 1998, p. 163).

26. As discussed in the following paragraphs, data compiled since Arvey and Murphy wrote this review of the literature in 1998 reinforces their conclusion

27. Dr. Goldberg's contention that subjectivity opens the door to bias was directly contradicted by a 2003 meta-analysis of diverse organizational datasets bearing on ethnic group differences in job performance (Roth et al., 2003). This meta-analysis, published in the leading peer-reviewed industrial-organizational psychology journal,f ound that objective measures of job performance are associated with similar, and sometimes larger, standardized ethnic group differences than are subjective measures. These researchers specifically concluded that their "*results do not support the position that subjective measures have more potential for bias than objective measures. Instead, we found the opposite*" (Roth et al., 2003, p. 702, emphasis added).

28. Also contrary to Dr. Goldberg's position, Hennessey and Bernardin (2003) studied 248,000 performance appraisals in real-world settings and found no support for the claim that minorities fare worse under subjective rating systems. Hennessey and Bernardin (2003) pointedly stated: "We must conclude that the burden is certainly on those experts who maintain

that there is some causal connection between a particular deleterious outcome for protected class members and a particular type of performance appraisal format or system. Our data do not support this argument" (p. 156).

29. Another recent meta-analysis further undermines a strong subjectivity-leads-to-bias point of view. McKay and McDaniel (2006) conducted the largest meta-analysis to date on Black-White differences in rated job performance (N = 110,000) and concluded that there was not clear evidence that subjective measurement methods disadvantaged minorities relative to objective measurement methods.[3]

30. Furthermore, research specifically on age bias does not show such bias to be the pervasive or powerful influence that Dr. Goldberg suggests it is. As mentioned above, Arvey and Gordon's (2004) meta-analysis of studies on the effect of age stereotyping on evaluative judgments found that "a large number of variables were shown to moderate this effect" (p. 485), and found in particular that the effect of age stereotypes were particularly weak in field studies (such as in the employment setting) as opposed to controlled lab studies.

31. Dr. Goldberg's own dissertation research supports the conclusion reached by Arvey and Gordon that simple extrapolation from the lab to the field is inappropriate. In her dissertation, Dr. Goldberg examined the effect of age stereotypes on hiring decisions in a field study but found that "[n]one of the proposed relationships between applicant age or the age context and the criterion variables was significant. These findings suggest that age stereotyping

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[3] "Measurement method addresses whether work performance is measured subjectively with ratings of performance or objectively scored using mechanical or quantified techniques. Evidence provided in Table 5 suggests that measurement method has a relatively low impact on mean racial differences in work performance (R = .10). Summary results for this moderator presented in Table 2 support this conclusion because effect sizes are very similar for subjective (d = 0.28) and objective (d = 0.22) measures of performance. In general, there does not appear to be a clear pattern of measurement method results" (McKay & McDaniel, 2006, p. 548).

may not be important in the selection process (Goldberg, 1997, p. 81)." As Dr. Goldberg appropriately notes in her dissertation, "[a]s the great majority of research on applicant age and organizational entry has taken place in laboratory settings, the generalizability of findings reported in these studies is questionable (Goldberg, 1997, p. 81)." Thus, Dr. Goldberg's very own research and the meta-analysis by Gordon and Arvey (2004) both indicate that stereotype effects found in laboratory studies do not reliably show up in field settings.

32. Furthermore, with respect specifically to interviews, Gorman had 20 years of experience in the industry (Gorman Deposition, p. 138), and thus considerable time to develop managerial expertise. Ericsson, one of the foremost experts on expertise, notes that:

> [m]any characteristics once believed to reflect innate talent are actually the result of intense practice extended for a minimum of 10 years (Ericsson, Krampe, & Tesch Römer, 1993, p. 363).

Experts often make quick decisions accurately in their domain of expertise, even in ambiguous and complex environments, because of their ability to focus on domain-relevant information (e.g., physicists, physicians, nurses, grandmaster chess players). Based on a recent and extensive literature review pertaining to the use of intuition in managerial decision making, Dane (2007) states that:

> [i]ndividuals who can bring complex, domain-relevant schemas to bear on a problem are more likely to make effective intuitive decisions than those who employ heuristics and simpler, domain-independent schemas (p. 43).

Dane's review of the literature also leads to another proposition:

> As the problem structure associated with a task becomes more judgmental, the effectiveness of intuitive decision making will *increase*. Returning again to our

> discussion of speed versus accuracy, intuition is most likely to effectively manage this trade-off when it is brought to bear on judgmental tasks (p. 46, emphasis added).

In short, expertise is not easy to come by; it requires extensive involvement and experience in the domain of interest. But once obtained and maintained, expertise can lead to well-developed schemas and heuristics that allow for acquiring relevant knowledge and making intelligent judgments quickly and efficiently (Gigerenzer, 2007).

33. I further explain in the next section the mismatch between the research literature on age bias and the facts of this case,e ven as Dr. Goldberg portrays those facts.

D. The Age Stereotyping Literature Does Not Support the Conclusions That Dr. Goldberg Seeks to Draw From It and Apply to this Case

34. To support her opinions, Dr. Goldberg's references (see Goldberg Report, pp. 26-28) include survey studies that did not involve any actual or even simulated decisions (e.g., Revenson, 1989; Shore et al., 2003), laboratory studies involving simulated employment decisions (e.g., Finkelstein et al., 1995; Rosen & Jerdee, 1976a) and laboratory studies that did not involve simulated employment decisions (e.g., Pendry & Macrae, 1999).

35. Whenever scientists infer that the results of one study will apply to a new setting, they need to consider the extent to which the new setting differs in key respects from the original research setting. To answer the question of whether research results can be applied in a new setting, we need the concept of *external validity*, which refers to the extent to which one can validly generalize from one research setting to another setting, where settings may differ because they use different measures, reflect different populations of individuals, take place at different points in time, and so on.

36. As noted above, Dr. Goldberg is undoubtedly aware of this problem of external validity, for she acknowledged in her own dissertation that, "*the generalizability of findings reported in [laboratory] studies is questionable*" (Goldberg, 1997, p. 81, emphasis added). Dr. Goldberg shares a similar concern regarding her own research on the employment interview: "Although our results indicated that interviewing skills and the interaction of interviewing skills and gender are important in college campus recruiting, it is unclear whether these results generalize to other interviewing contexts. Further research is needed to examine whether similar results are obtained with nonstudent targets" (Goldberg & Cohen, 2004, p. 369).

37. Indeed, Dr. Goldberg's dissertation research conducted in a field setting failed to find the kind of age stereotyping effects often found in lab settings:

> [S]tudying the impact of age on recruiter's perceptions of applicants on these age-related dimensions appeared to provide an opportunity to observe the stereotyping process. Interestingly, stereotyping did not appear to play a role in applicant assessments (Goldberg, 1997, p. 83).
>
> Because real targets provide a lot more information than just their age, subjects may be less influenced by stereotypes when the target is a person than when the target is a written description of a person (Goldberg, 1997, p. 89).

The concluding sentence to Dr. Goldberg's dissertation reflects on the implications of her study:

> Although no research has expressly examined the impact of the passage of the Age Discrimination in Employment Act, the findings of this study suggest it may be serving its purpose of reducing discrimination against older workers (Goldberg, 1997, p. 92).

38. Despite this awareness, *as shown by her own analysis* that research on age stereotypes in the laboratory lack external validity, Dr. Goldberg does not deal with the yawning gap between the conditions of the studies she cites and the conditions of this case. I note here a number of ways in which Dr. Goldberg's analysis of the case fails and how the research literature fails to generalize to this case based on the "environmental factors" that Dr. Goldberg notes in her Report.

1. Organizational Culture

39. Dr. Goldberg asserts that "Morgan Stanley had a culture of age-based animus" (Goldberg Report, p. 18). To support this conclusion, Dr. Goldberg cites allegations of "ageist slurs" and incidents supposedly involving Mr. Sullivan (Goldberg Report, p. 18). Dr. Goldberg cites no studies indicating criteria for declaring a corporate culture ageist, provides no explicit criteria that she claims to have applied to the case, and provides no information about her methodology for assessing corporate culture beyond an apparent unsystematic gathering of anecdotal data to support her conclusion.

40. Dr. Goldberg's contention that she can assess the corporate culture at Morgan Stanley from the limited evidence she cites, without conducting any surveys, interviews, or observations within the workplace in question and without specifying her standards for deciding what constitutes an "age-based animus" within a company, is scientifically indefensible. There exist social scientific methods and tools for assessing corporate culture (e.g., Cameron & Quinn, 2006), but Dr. Goldberg did not utilize any of those methods and tools. I know of no industrial-organizational psychologist who considers it appropriate to examine a few statements and reports of incidents involving a plaintiff in a lawsuit, at the exclusion of others, and reach a scientific conclusion about corporate culture based on that limited evidence using unexpressed definitions and criteria.

41. Furthermore, it is simply not possible to reach any reliable conclusion about the wider culture at Morgan Stanley by examining only incidents involving the plaintiff. An assessment of corporate culture would have to consider how a range of persons are treated over the period for which corporate culture is being assessed. For instance, Dr. Goldberg should have taken into account how Morgan Stanley treated other persons within Mr. Sullivan's region, including those of similar age, as well as how Morgan Stanley treats persons in other regions across the same age range. Moreover, Dr. Goldberg should have considered corporate policies to determine whether Morgan Stanley executives rejected the sort of ageist culture that she attributes to Morgan Stanley,a nd she should have examined the efforts Morgan Stanley takes to provide persons holding grievances with avenues for complaint. Dr. Goldberg did none of this.

42. She also ignored the available information indicating that Mr. Gorman had actually retained a regional director who was older than Mr. Sullivan (Ms. Black) and two others who were within two years of Mr. Sullivan's age (Mr. Mahon and Mr. Page) (see Gorman Deposition, pp. 112, 128-129,; Plaintiff's Exhibit 45), as well as any other personnel decisions Gorman made after joining Morgan Stanley. None of this information is supportive of the argument that age stereotypes were influencing Mr. Gorman's business decision to terminate Mr. Sullivan. In sum, the information Dr. Goldberg cites is much too limited to conclude that age stereotyping was part of an age-biased climate at Morgan Stanley.

2. Cognitive "Busyness"

43. Dr. Goldberg asserts that "Mr. Gorman was cognitively busy" (Goldberg Report, p. 19). To support this claim, she cites a study by Pendry and Macrae (1999) but does not provide details about that study. Examination of these details reveals how inapplicable that study is to the present case.

44. Pendry and Macrae (1999) examined how undergraduate students formed impressions about social groups when they were "cognitively busy" and when they were not cognitively busy. In these laboratory experiments, being "cognitively busy" meant that a participant had to memorize an 8-digit number in 25 seconds and hold this digit in her memory while subsequently being given information about a group that was also to be recalled later. Participants who were cognitively busy—that is, had been given two competing memory tasks—were more likely to recall stereotypic information about groups than participants who were not cognitively busy.

45. Dr. Goldberg provides no evidence indicating that Mr. Gorman was operating under any working memory constraints at all during his interactions with Mr. Sullivan, much less that he was operating under the kind of high working-memory demands placed on the students in the Pendry and Macrae (1999) experiments. Absent evidence that Mr. Gorman was operating under similar working memory demands, there is no basis for applying the Pendry and Macrae (1999) study to this case.

46. Contrary to her claim, the facts that Dr. Goldberg cites regarding Morgan Stanley being "in crisis" and "under fire from the NASD" do not provide evidence that Mr. Gorman was working under "an enormous cognitive load" (Goldberg Report, p. 19). When cognitive psychologists speak of "cognitive load," they are referring specifically to demands on attention and working memory, either as characteristic that varies across individuals or as achieved through manipulations of the type used in the Pendry and Macrae study. The term "cognitive load," as used within psychological research, is not synonymous with being a busy executive with much important business to take care of; it is entirely possible for busy managers *not* to be under a heavy cognitive load in the sense that psychologists use this technical term, and Dr.

Goldberg provides no evidence that Mr. Gorman was operating under cognitive load at relevant times relevant to the case, as that concept is properly understood and applied.

47. Furthermore, the participants in Pendry and Macrae (1999) were specifically directed to consider groups as a whole. That is, the focus of those studies was on judgments about groups, and there was no consideration at all of how subjects would react to individual members of the groups about whom they had personalizing information. The experimental manipulation thus directed participants' attention to groups and group stereotypes and does not provide evidence of how participants in those experiments might have reacted toward individuals.

3. Individuating Information

48. Dr. Goldberg asserts that Mr. Gorman had only limited information about Mr. Sullivan, and she asserts that "[l]imited information about a target is another well-established contributor to stereotype reliance" (Goldberg Report, p. 19). In support of this proposition, Dr. Goldberg cites a 1989 study by Revenson (1989; Dr. Goldberg cites this study as "Ravenson, 1989," but it is actually Revenson, 1989).

49. The Revenson (1989) study has no application to this case, as the participants in that study, health care professionals attending a professional conference, were given a *one paragraph description of a hypothetical patient* and then asked to rate the briefly-described hypothetical patient on some scales meant to assess the attitudes and perceptions of the hypothetical patient. Even with only this extremely limited description, there was not evidence of negative age stereotyping in the participants' ratings. As Revenson (1989) notes,

> [t]he general absence of main effects for age on the global attitudinal measures—together with the fact that the one clearly nonsignificant Age X Contact interaction was on the evaluative dimension of the semantic-differential scales—

> may be taken as evidence that negative age stereotyping may not be as prevalent among physicians as has been described in past studies. At the same time, the data provide some evidence for compassionate stereotypes, particularly on psychosocial dimensions of patient care (p. 232).

50. Thus, Revenson (1989) in no way supports Dr. Goldberg's conclusions: The limited information provided to physicians in the Revenson study was drastically less information than Mr. Gorman had about Mr. Sullivan, and yet Revenson still did not find the sort of negative age stereotyping that Goldberg suggests had been found (indeed, not only do I find Dr. Goldberg's application of the Revenson study to be inappropriate, but I consider Dr. Goldberg's description of the supposed finding from the Revenson study to be misleading).

51. Furthermore, Dr. Goldberg ignores the considerable evidence showing that small amounts of individuating information (e.g., specific job-relevant data) about an individual drastically reduce the likelihood of stereotyping. Dr. Goldberg downplays the extent of contact that Mr. Gorman had with Mr. Sullivan, suggesting that he only had about an hour total with Mr. Sullivan (Goldberg Report, p. 19), although the record evidence indicates that they spent considerably more time together, including a holiday party meeting, an hour interview in Orlando, Florida, a half day together in Boston, and another meeting in Gorman's Westchester, New York office (Gorman Deposition, pp. 129, 146-151, 160-161).

52. Kunda and Spencer (2003) note that

> even if stereotypes are activated at the start of an interaction with a stereotyped individual, this activation can dissipate as the interaction continues .... In more than half a dozen studies, we have found no trace of stereotype activation in

> participants who had observed or interacted with a Black or an Asian individual for about 10 minutes . . . (p. 523).

If the effects of group-based expectancies can be washed out in even these brief social encounters, it is not reasonable to conclude that much longer interactions between Mr. Sullivan and Mr. Gorman had no effect on Mr. Gorman's likelihood of relying on age stereotypes rather than individualized impressions about Mr. Sullivan to make his decision.

53. Kunda and Spencer (2003, p. 530) further note:

> People view group stereotypes as irrelevant to their impressions of a group member when they also possess individuating information about this person... *Indeed, they usually do not apply stereotypes to individuals about whom they have diagnostic individuating information*... (p. 530; emphasis added).

54. Jussim and colleagues (1995) reach a similar conclusion:

> We now have a pretty clear scientific understanding of the conditions under which stereotypes are most likely to influence judgments. We know, for example, that when individuating information is ambiguous or difficult to detect..., people often rely on their stereotypes rather than individuating information. However, of all the studies that have manipulated both group information (e.g.,e thnicity, gender, social class, and profession) and the personal characteristics of targets (e.g., job competence and academic success), we are not aware of a single one that has shown that people ignore individual differences... Perceivers base their judgments far more on the personal characteristics of targets than on targets' gender or membership in ethnic groups... although someday some researcher may

> identify a condition under which stereotypes really do lead people to ignore individual differences, this hypothesis has so far only been falsified: it has been repeatedly tested, but never confirmed (p. 13).

55. Only by misapplying the Revenson (1989) study and ignoring these well-established findings on the power of individuating information can Dr. Goldberg offer her opinion that age stereotypes were at work here.

4. Relative Age

56. Dr. Goldberg next asserts that Mr. Gorman compared Mr. Sullivan to younger individuals, and cites two studies for the proposition that older job candidates fare worse when compared to younger candidates (Goldberg Report, p. 20).

57. First, the only "younger" person Dr. Goldberg specifically mentions here was a 44-year old male, Mr. Taylor, in another type of position (elsewhere, she refers to Ms. Stillwell, whom she says was 44 years of age as well; see Goldberg Report, p. 3). I see no evidence in her Report that Dr. Goldberg has any idea of the relative appearance, behaviors, and qualifications of Mr. Sullivan and this other person; thus, she has no basis for assuming that Mr. Sullivan and Mr. Taylor triggered different stereotypes, if any stereotypes at all. Moreover, Dr. Goldberg provides no basis for her assertion that Mr. Sullivan "would have been willing to take" the position that was supposedly given to Mr. Taylor and provides no evidence that Mr. Gorman made the decision about Mr. Taylor and, if so, about his basis for that decision. Most importantly, she provides no evidence that Mr. Taylor was a candidate for Mr. Sullivan's job and thus someone who was actually compared to Mr. Sullivan when the decision was being made. And she ignores the fact that Mr. Gorman retained Ms. Black and not Mr. Sullivan, even though Ms. Black was seven years older than Mr. Sullivan (Plaintiff's Exhibit 45).

58. Second, Dr. Goldberg does not disclose that the relative comparison she offers, involving two middle-aged men (Taylor and Sullivan) only 11 years apart in chronological age, does not match the age gap in the Cleveland et al. (1988) study that she cites, which had college student participants compare hypothetical candidates of 27 and 28 years of age to hypothetical candidates of 60 and 61 years of age—*an age gap in excess of 30 years*.

59. And Dr. Goldberg does not disclose that Finkelstein et al. (1995) treated persons between the ages of 17 and 29 as younger raters (or the equivalent of managerial reviewers), and persons between the ages of 30 and 60 as older raters. Thus, Mr. Gorman falls into the older-age group of raters within the Finkelstein et al. (1995) study, and for this group Finkelstein et al. (1995) did not find age bias against older workers:

> When older people were the raters, the in-group bias hypothesis was not supported. There was essentially no difference in older people's ratings of older and younger workers' job qualifications. Thus, for this set of studies, there was no support of an in-group bias with respect to older workers.
>
> These results suggest that older people do not rely as heavily on age stereotypes as do younger people. One possibility for why older people may rely less than younger people on age stereotypes is that older people tend to have more knowledge about experiences at all age levels, having transitioned through a number of life span developmental stages (pp. 658-659).

60. Again, the studies Dr. Goldberg cites simply do not support the propositions she attributes to them and do not support her opinions here.

5. Age Norms

61. Dr. Goldberg states that Mr. Sullivan being older than Mr. Gorman contributed to the "salience and activation of age-based stereotypes." However, none of the sources that Dr.